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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/973,791	10/09/2001	Erhard Schreck	3123-384	7249

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EXAMINER
SMITH, TYRONE W

ART UNIT	PAPER NUMBER
2837	

DATE MAILED: 07/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .	Applicant(s)	
	09/973,791	SCHRECK ET AL.	
	Examiner	Art Unit	
	Tyrone W Smith	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☒ Claim(s) *31-35* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Claim 4, 5, 7, 17, 26, 28, and 29 objected to because of the following informalities: For example in claim 17 the statement ".... maximum normal operating current of said disk drive is less than about 0.5 Amp". Examiner requests that the Applicant take out the word about or modify the claims. Appropriate correction is required.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 6, 9-12, and 15-17 rejected under 35 U.S.C. 102(b) as being anticipated by Fukushima et al (5016124).

Regarding Claims 1, 2, 6, 12, 15 and 16. Fukushima discloses a recording apparatus with control of energy to the (disc) drive at start up. Fukushima's invention includes a user selectable maximum current draw (Figure 1A item 96); receiving a maximum current draw selection (Figure 1A items 93-96; abstract; column 5 lines 1-24 and column 20 lines 67-68) and limiting an actual current draw of the drive to a selected maximum (column 20 lines 67-67 and column 21 lines 1-7) which is similar to Fukushima where the supply means (current) and control means (Figure 1A items 93 and 91) start, in the first start mode, the drive means/disc drive (Figure 1A items 2,3, 6, 88 and 89), in a first fixed signal and controls (through current) the drive speed of the drive means/disc drive in the same speed as the first mode (using the same

current used in the first start mode for normal operation). Further, the current draw selected can be a plurality of amounts. Refer to column 21 lines 47-68 and column 22 lines 1-6.

Regarding Claim 9 and 10. Fukushima discloses a hardware switch/trigger button (Figure 1A item 96). The trigger button used by Fukushima can be a jumper, mechanical switch or similar type.

Regarding Claims 11. Fukushima specifies maximum current draw selection by using a combination of the trigger button and systems controller (Figure 1A item 91). Refer to column 6 lines 49-55.

Regarding Claim 17. Fukushima's invention, as well as others of similar type and scope, can set a normal operating current of the disk drive.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 3-5 and 13-14 rejected under 35 U.S.C. 103(a) as being unpatentable over Fukushima et al (5016124) in view of Dunn (5381279).

Regarding Claims 3-5 and 13-14. Fukushima discloses a recording apparatus with control of energy to the (disc) drive at start up. Fukushima's invention includes a user selectable maximum current draw (Figure 1A item 96); receiving a maximum current draw selection (Figure 1A items 93-96; abstract; column 5 lines 1-24 and column 20 lines 67-68) and limiting an actual current draw of the drive to a selected maximum (column 20 lines 67-67 and column 21 lines 1-7) which is similar to Fukushima where the supply means (current) and control means (Figure

1A items 93 and 91) start, in the first start mode, the drive means/disc drive (Figure 1A items 2,3, 6, 88 and 89), in a first fixed signal and controls (through current) the drive speed of the drive means/disc drive in the same speed as the first mode (using the same current used in the first start mode for normal operation). Further, the current draw selected can be a plurality of amounts. Refer to column 21 lines 47-68 and column 22 lines 1-6. However, Fukushima does not disclose the disk drive during seek operation is equal to a steady state spin current of a spindle motor of the disk drive plus a current drawn by the actuator of the disk drive when actuator is in operation form a first to a second position.

Dunn discloses a disk drive system with adjustable spindle and actuator power to improve seek and access performance. Dunn discloses the disk drive during seek operation is equal to a steady state spin current of a spindle motor of the disk drive plus a current drawn by the actuator of the disk drive when actuator is in operation form (abstract; column 3 lines 21-44 and column 4 lines 4-48).

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Fukushima's a recording apparatus with control of energy to the (disc) drive at start up with Dunn's a disk drive system with adjustable spindle and actuator power to improve seek and access performance. The advantage of combining the two would provide a disk drive system in which seek performance is improved while maintaining constant power utilization.

6. Claims 18-29 and 31-35 rejected under 35 U.S.C. 103(a) as being unpatentable over McAllister (5397971) in view of Fukushima et al (5016124).

Regarding Claims 18, 19, 22, 23, 25-29 and 32. McAllister discloses a bi-polar disk torquing system for a disk drive that includes a base, spindle motor, first storage disk, transducer and actuator which are disclose in Figures 1 and 7, column 3 lines 47-68, column 4

lines 1-61 and column 8 lines 25-57. However, McAllister does not disclose a maximum current draw selector where it selects a maximum disk drive supply current and the maximum current draw by the disk drive does not exceed the selected maximum.

Fukushima discloses a recording apparatus with control of energy to the (disc) drive at start up. Fukushima's invention includes a user selectable maximum current draw (Figure 1A item 96); receiving a maximum current draw selection (Figure 1A items 93-96; abstract; column 5 lines 1-24 and column 20 lines 67-68) and limiting an actual current draw of the drive to a selected maximum (column 20 lines 67-67 and column 21 lines 1-7) which is similar to Fukushima where the supply means (current) and control means (Figure 1A items 93 and 91) start, in the first start mode, the drive means/disc drive (Figure 1A items 2,3, 6, 88 and 89), in a first fixed signal and controls (through current) the drive speed of the drive means/disc drive in the same speed as the first mode (using the same current used in the first start mode for normal operation). Further, the current draw selected can be a plurality of amounts. Refer to column 21 lines 47-68 and column 22 lines 1-6.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine McAllister discloses a bi-polar disk torquing system for a disk drive with Fukushima discloses a recording apparatus with control of energy to the (disc) drive. The advantage of combining the two would provide a system, which is capable of minimizing not only lag time but electric energy consumption.

Regarding Claims 20 and 33-34. Fukushima discloses a hardware switch/trigger button (Figure 1A item 96). The trigger button used by Fukushima can be a jumper, mechanical switch or similar type.

Regarding Claims 21 and 35. Fukushima specifies maximum current draw selection by using a combination of the trigger button and systems controller (Figure 1A item 91). Refer to column 6 lines 49-55.

Regarding Claim 24. Fukushima discloses the maximum disk drive supply current to the disk drive plus an additional (second) amount of current less than the maximum disk drive supply current. Refer to column 21 lines 47-68 and column 22 lines 1-6.

7. Claim 30 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tyrone W Smith whose telephone number is 703-306-5987. The examiner can normally be reached on weekdays from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Nappi, can be reached on (703) 308-3370. The fax phone number for the organization where this application or proceeding is assigned is 703-308-3431.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.

Tyrone Smith Art Unit 2837

ROBERT E. NAPPI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800